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EXAMINER	
MANCHO, RONNIE M	

ART UNIT	PAPER NUMBER
3663	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/800,728	NESBITT, DAVID W.	
	Examiner	Art Unit	
	Ronnie Mancho	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In independent claims 1, 13, and 25, the limitations therein are not clear. The applicant claims "at least two of the directed links being associated with two nodes that are the same such that (1) a starting node of a first link of the at least two directed links is a same node as an ending node of a second link of the at least two directed links and (2) and an ending node of the first link of the at least two directed links is the same node as a starting node of the second link of the at least two directed links". There is no such a connection between links and nodes in applicant's drawing and it not clear what applicant is claiming.

As seen from the applicant's fig. 3 and specification, the applicant refers to links as roads for example links AB, BC, CD, BE, EF, EG, CF, GM, etc. According to applicant's independent claims, if link BE is a second link and link EF a first link, then the node 330N is the starting node of first link EF and an ending node of second link BE. "The ending node 335N of the first link EF" is not the same as "the starting node 315N of the second link BE" because "the starting node 315N of the second link BE" is not the ending node of the first link EF" as claimed. When any combination or permutation of the nodes and links are put together, they do not read on applicant's claims.

Therefore, the rest of the claims are rejected for depending on a rejected base claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9, 11, 13-21, 23, 25-33, 35, 37, 38, 39 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Fugita et al (5513110).

Regarding claim 1, Fugita et al (figs. 1-7) disclose a method for determining a preferred route using a computer-implemented routing system, the method comprising:

using a routing system to access an origin and a destination (see abstract of Fugita) in a routing graph (hierarchy graph, figs 3) representing a network of roads including two or more nodes (see abstract) and one or more directed links (figs. 3A, 4, 5), each directed link being associated with a direction of travel (figs. 11 &13; col. 10, lines 11-60) along the directed link from a starting node to an ending node (abstract; col. 6, lines 29-51) and representing a road and each node representing an intersection that includes at least one road;

using the routing system to determine a preferred route from the origin to the destination by using at least one directed link (abstract; col. 6, lines 29-51); and

communicating the preferred route from the routing system to a user system (last sentence of abstract; col. 4, lines 25-31; col. 10, lines 11-28),

wherein at least two of the directed links being associated with two nodes that are the same such that (1) a starting node of a first link of the at least two directed links is a same node as an ending node of a second link of the at least two directed links and (2) and an ending node of the first link of the at least two directed links is the same node as a starting node of the second link of the at least two directed links.

Regarding claim 2, Fugita et al disclose the method of claim 1 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises determining a preferred route from the origin to the destination by comparing the density of directed links in a first region of the routing graph to the density of directed links in a second region (col. 6, lines 16-28; col. 8, lines 34-40; figs. 3) of the routing graph.

Regarding claim 3, Fugita et al disclose the method of claim 1 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by applying a factor to a speed (col. 12, lines 10-15) associated with a particular directed link based on the density (col. 6, lines 16-28; col. 8, lines 34-40; figs. 3) of directed links in a region of the routing graph in which the particular directed link is located.

Regarding claim 4, Fugita et al (figs. 1-7) disclose the method of claim 1 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises determining a preferred route from the origin to the destination by using directed link information for at least one directed link.

Regarding claim 5, Fugita et al (figs. 1-7) disclose the method of claim 4 wherein the directed link information includes *one or more* of a cost (col. 6, lines 1-4; col. 7, lines 41-51; col.

8, lines 16-26) associated with the directed link, whether the directed link enters a no-outlet region, whether the directed link lies within a no-outlet region, and an intersection cost for each directed link-to-link transition.

Regarding claim 6, Fugita et al (figs. 1-7) disclose the method of claim 4 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by using node information for at least one node.

Regarding claim 7, Fugita et al (figs. 1-7) disclose the method of claim 6 wherein the node information includes one or more directed links that link to the node, the number of driveable links that link to or from the node, and the total number of links that link to the node.

Regarding claim 8, Fugita et al (figs. 1-7) disclose the method of claim 1 wherein the preferred route is a preferred route for driving a vehicle from the origin to the destination.

Regarding claim 9, Fugita et al (figs. 1-7) disclose the method of claim 1 wherein the preferred route is a preferred route for walking from the origin to the destination.

Regarding claim 11, Fugita et al (figs. 1-7) disclose the method of claim 1 wherein the routing system and the user system use the same processor (fig. 2).

Regarding claim 13, Fugita et al (figs. 1-7) disclose a computer-readable medium or propagated signal having embodied thereon a computer program (col. 4, lines 32-45) configured to determine a preferred route using a computer-implemented routing system, the medium or signal comprising one or more code segments configured to:

use a routing system to access an origin and a destination (see abstract of Fugita) in a routing graph (hierarchy graph, figs 3) representing a network of roads including two or more nodes (see abstract) and one or more directed links (figs. 3A, 4, 5), each directed link being associated with a direction of travel (figs. 11 &13; col. 10, lines 11-60) along the directed link from a starting node to an ending node (abstract; col. 6, lines 29-51) and representing a road and each node representing an intersection that includes at least one road;

use the routing system to determine a preferred route from the origin to the destination by using at least one directed link (abstract; col. 6, lines 29-51); and

communicate the preferred route from the routing system to a user system (last sentence of abstract; col. 4, lines 25-31; col. 10, lines 11-28),

wherein at least two of the directed links being associated with two nodes that are the same such that (1) a starting node of a first link of the at least two directed links is a same node as an ending node of a second link of the at least two directed links and (2) and an ending node of the first link of the at least two directed links is the same node as a starting node of the second link of the at least two directed links.

Regarding claim 14, Fugita et al (figs. 1-7) disclose the medium or signal of claim 13 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by comparing the density of directed links in a first region of the routing graph to the density of directed links in a second region (col. 6, lines 16-28; col. 8, lines 34-40; figs. 3) of the routing graph.

Regarding claim 15, Fugita et al disclose the method of claim 13 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by applying a factor to a speed (col. 12, lines 10-15) associated with a particular directed link based on the density (col. 6, lines 16-28; col. 8, lines 34-40; figs. 3) of directed links in a region of the routing graph in which the particular directed link is located.

Regarding claim 16, Fugita et al disclose the medium or signal of claim 13 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by using directed link information for at least one directed link.

Regarding claim 17, Fugita et al (figs. 1-7) disclose the medium or signal of claim 16 wherein the directed link information includes *one or more* of a cost (col. 6, lines 1-4; col. 7, lines 41-51; col. 8, lines 16-26) associated with the directed link, whether the directed link enters a no-outlet region, whether the directed link lies within a no-outlet region, and an intersection cost for each directed link-to-link transition.

Regarding claim 18, Fugita et al (figs. 1-7) disclose the medium or signal of claim 16 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by using node information for at least one node.

Regarding claim 19, Fugita et al (figs. 1-7) disclose the medium or signal of claim 18 wherein the node information includes one or more directed links that link to the node, the number of driveable links that link to or from the node, and the total number of links that link to the node.

Regarding claim 20, Fugita et al (figs. 1-7) disclose the medium or signal of claim 13 wherein the preferred route is a preferred route for driving a vehicle from the origin to the destination.

Regarding claim 21, Fugita et al (figs. 1-7) disclose the medium or signal of claim 13 wherein the preferred route is a preferred route for walking from the origin to the destination.

Regarding claim 23, Fugita et al (figs. 1-7) disclose medium or signal of claim 13 wherein the routing system and the user system use the same processor (fig. 2).

Regarding claim 25, Fugita et al (figs. 1-7) disclose a system for determining a preferred route using a computer-implemented routing system, the system configured to:

access an origin and a destination (see abstract of Fugita) in a routing graph (hierarchy graph, figs 3) representing a network of roads including two or more nodes (see abstract) and one or more directed links (figs. 3A, 4, 5), at least one directed link being associated with a direction of travel (figs. 11 &13; col. 10, lines 11-60) along the directed link from a starting node to an ending node (abstract; col. 6, lines 29-51) and representing a road and each node representing an intersection that includes at least one road;

determine a preferred route from the origin to the destination by using at least one directed link (abstract; col. 6, lines 29-51); and

communicate the preferred route from the routing system to a user system (last sentence of abstract; col. 4, lines 25-31; col. 10, lines 11-28),

wherein at least two of the directed links being associated with two nodes that are the same such that (1) a starting node of a first link of the at least two directed links is a same node as an ending node of a second link of the at least two directed links and (2) and an ending node of the first link of the at least two directed links is the same node as a starting node of the second link of the at least two directed links.

Regarding claim 26, Fugita et al (figs. 1-7) disclose the system of claim 25 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by comparing the density of directed links in a first region of the routing graph to the density of directed links in a second region (col. 6, lines 16-28; col. 8, lines 34-40; figs. 3) of the routing graph.

Regarding claim 27, Fugita et al (figs. 1-7) disclose the system of claim 25 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by applying a factor to a speed (col. 12, lines 10-15) associated with a particular directed link based on the density (col. 6, lines 16-28; col. 8, lines 34-40; figs. 3) of directed links in a region of the routing graph in which the particular directed link is located.

Regarding claim 28, Fugita et al disclose the system of claim 25 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by using directed link information for at least one directed link.

Regarding claim 29, Fugita et al (figs. 1-7) disclose the system of claim 28 wherein the directed link information includes *one or more* of a cost (col. 6, lines 1-4; col. 7, lines 41-51; col. 8, lines 16-26) associated with the directed link, whether the directed link enters a no-outlet region, whether the directed link lies within a no-outlet region, and an intersection cost for each directed link-to-link transition.

Regarding claim 30, Fugita et al (figs. 1-7) disclose the system of claim 28 wherein determining a preferred route from the origin to the destination by using at least one directed link comprises:

determining a preferred route from the origin to the destination by using node information for at least one node.

Regarding claim 31, Fugita et al (figs. 1-7) disclose the system of claim 30 wherein the node information includes *one or more* directed links that link to the node, the number of driveable links that link to or from the node, and the total number of links that link to the node.

Regarding claim 32, Fugita et al (figs. 1-7) disclose the system of claim 25 wherein the preferred route is a preferred route for driving a vehicle from the origin to the destination.

Regarding claim 33, Fugita et al (figs. 1-7) disclose the system of claim 25 wherein the preferred route is a preferred route for walking from the origin to the destination.

Regarding claim 35, Fugita et al (figs. 1-7) disclose the system of claim 25 wherein the routing system and the user system use the same processor (fig. 2).

Regarding claim 37, Fugita et al (figs. 1-7) disclose the method of claim 1 wherein the routing graph includes two directed links, each of which extending between a common pair of nodes but having different directions of travel associated therewith.

Regarding claim 38, Fugita et al (figs. 1-7) disclose the medium or signal of claim 13 wherein the routing graph includes two directed links, each of which extending between a common pair of nodes but having different directions of travel associated therewith.

Regarding claim 39, Fugita et al (figs. 1-7) disclose the system of claim 25 wherein the routing graph includes two directed links, each of which extending between a common pair of nodes but having different directions of travel associated therewith.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 10, 12, 22, 24, 34, 36 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Fugita et al in view of Ohmura et al (2002/0077745).

Regarding claim 10, Fugita et al (figs. 1-7) disclose the method of claim 1, but did not mention an Internet. However, in the advent of the proliferation of the Internet, Ohmura et al (section 006) teaches of a method for determining a preferred route using a computer implemented routing system wherein the routing system comprises:

a routing system provided through an Internet service provider (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art of navigation at the time the invention was made to modify the Fugita et al device for the purpose of taking advantage of the Internet wherein map data stored in a vehicles hard drive or DVD_ROM is updated using the Internet.

Regarding claim 12, Fugita et al (figs. 1-7) disclose the method of claim 1, but did not mention an Internet. However, in the advent of the proliferation of the Internet, Ohmura et al (section 006) teaches of a method for determining a preferred route using a computer implemented routing system, wherein communicating the preferred route to a user comprises communicating the preferred route over a connection that is established using the Internet (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art of navigation at the time the invention was made to modify the Fugita et al device for the purpose of taking advantage of the Internet wherein map data stored in a vehicles hard drive or DVD_ROM is updated using the Internet.

Regarding claim 22, Fugita et al (figs. 1-7) disclose the medium or signal of claim 13, but did not mention an Internet. However, in the advent of the proliferation of the Internet, Ohmura et al (section 006) teaches of a medium or signal for determining a preferred route using a computer implemented routing system wherein the routing system comprises:

a routing system provided through an Internet service provider (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art of navigation at the time the invention was made to modify the Fugita et al device for the purpose of taking

advantage of the Internet wherein map data stored in a vehicles hard drive or DVD_ROM is updated using the Internet.

Regarding claim 24, Fugita et al (figs. 1-7) disclose the medium or signal of claim 13, but did not mention an Internet. However, in the advent of the proliferation of the Internet, Ohmura et al (section 006) teaches of a medium or signal for determining a preferred route using a computer implemented routing system, wherein communicating the preferred route to a user comprises communicating the preferred route over a connection that is established using the Internet (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art of navigation at the time the invention was made to modify the Fugita et al device for the purpose of taking advantage of the Internet wherein map data stored in a vehicles hard drive or DVD_ROM is updated using the Internet.

Regarding claim 34, Fugita et al (figs. 1-7) disclose the system of claim 25, but did not mention an Internet. However, in the advent of the proliferation of the Internet, Ohmura et al (section 006) teaches of a medium or signal for determining a preferred route using a computer implemented routing system wherein the routing system comprises:

a routing system provided through an Internet service provider (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art of navigation at the time the invention was made to modify the Fugita et al device for the purpose of taking advantage of the Internet wherein map data stored in a vehicles hard drive or DVD_ROM is updated using the Internet.

Regarding claim 36, Fugita et al (figs. 1-7) disclose the system of claim 25, but did not mention an Internet. However, in the advent of the proliferation of the Internet, Ohmura et al (section 006) teaches of a medium or signal for determining a preferred route using a computer implemented routing system, wherein communicating the preferred route to a user comprises communicating the preferred route over a connection that is established using the Internet (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art of navigation at the time the invention was made to modify the Fugita et al device for the purpose of taking advantage of the Internet wherein map data stored in a vehicles hard drive or DVD_ROM is updated using the Internet.

Response to Arguments

3. Applicant's arguments filed 1/7/05 have been fully considered but they are not persuasive.

The applicant's arguments are directed to subject matter that has a 112 rejection. Therefore, the examiner has applied art to the claims as best understood.

Further, the current action is not final since some claims were inadvertently not considered or missed when they were filed in a preliminary amendment.

Communication

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 703-305-6318. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 703-305-8233. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Ronnie Mancho
Examiner
Art Unit 3663

March 30, 2005.

THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600